

**REMARKS****Claim Status**

Claims 1-10 are pending after entry of this paper. Claims 1-10 have been rejected.

Reconsideration and withdrawal of the pending rejections in view of the following remarks is respectfully requested.

**Response to Rejections under 35 U.S.C. §102(b)**

Claims 1, 2, and 4 have been finally rejected under 35 U.S.C. § 102(b) for allegedly being anticipated by Campbell et al (WO 01/03840A) ("Campbell"). Specifically, the Examiner contends that Campbell teaches the steps of the method including measuring, obtaining and defining in addition to teaching Fourier transformation. Applicants respectfully disagree with the Examiner's contentions and traverse the rejection.

As an initial matter, applicants point out that this is the first time the claims have been rejected under 35 U.S.C. § 102(b). The prior non-final office action, dated February 19, 2009, contained rejections under 35 U.S.C. § 112, second paragraph. In the February 19, 2009 office action, the Examiner indicated that the claims would be allowable if rewritten or amended to overcome the rejections. Applicants assert that the response filed May 19, 2009 addressed the Examiner's concerns.

On March 6, 2009, applicants timely filed an Information Disclosure statement to identify Campbell (WO 01/03840) which was cited by a foreign patent office less than 90 days before March 6, 2009. Campbell (WO 01/03840) is the PCT counterpart to U.S. Patent No. 6,874,364 B1 ("364 patent") issued to Campbell et al. It was noted that the '364 patent was

identified by Examiner Miller on the Notice of References Cited which was mailed to applicants on February 19, 2009. Applicants submitted the Campbell (WO 01/03840) publication along with the Office Communication from the related Australian Patent Office in order to comply with the duty of disclosure. Thus, the '364 patent to Campbell was previously considered by the Examiner prior to the issuance of the first office action.

Regardless, applicants assert that the claims are not anticipated by Campbell. As the Examiner is well aware, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (MPEP § 2131) (emphasis added). Applicants assert that each and every element of the instant claims is not disclosed, either expressly or inherently, in the cited reference.

First, applicants respectfully direct the Examiner's attention to claim 1 step (a) which states "measuring oscillations occurring in the mill electric motor...." Applicants assert that this measuring step is different than the measuring step disclosed in Campbell. Specifically, Campbell does not describe measuring oscillations in the mill electric motor. Instead, Campbell teaches that the vibrational events of the machine are measured by a sensor, which is located on the machine. The signal of the sensor is used to analyze single vibrational events of the particulate matter. Therefore, applicants assert that the instant claims are novel and distinguishable over Campbell.

Second, step (b) of instant claim 1 states: "obtaining measurements  $P(n)$ , wherein a mill oscillation phase ( $\theta$ ) is defined by using a frequency domain analysis...." Applicants assert that this step is not disclosed in Campbell. The instant specification further describes the oscillation phase ( $\theta$ ) and provides an equation for calculating ( $\theta$ ), which has a relationship to the

lifter bars of the machine. Therefore, applicants assert that the instant claims are novel and distinguishable over Campbell because Campbell does not disclose this claim element.

Third, applicants assert that step (c) of instant claim 1 is not disclosed by Campbell. Specifically, Campbell does not describe “defining the degree of fullness of a mill and the load toe angle ( $\phi_k$ ) by means of the mill oscillation phase ( $\theta$ )”. That is, Campbell does not describe or teach defining the fullness of a mill or the load toe angle in the manner required by the claims.

Applicants assert that Campbell does not teach or disclose each and every element of the claimed invention. Accordingly, applicants respectfully request reconsideration and withdrawal of the rejections to claims 1, 2, and 4 under 35 U.S.C. § 102(b).

**Response to Rejections under 35 U.S.C. §103(a)**

Claims 3 and 5-10 have been finally rejected under 35 U.S.C. § 103(a) for allegedly being obvious over Campbell (WO 01/03840A). However, the Examiner admits that Campbell does not teach “mill oscillation related to mill torque, independent of fluctuations in the mill rotating speed and the claimed mathematical model.” The Examiner then argues that the applicant has “failed to establish any criticality or synergistic results which are derived from the recited steps...”. Applicants respectfully disagree with the Examiner’s contentions and traverse this rejection.

Applicants point out that this is the first time the claims have been rejected under 35 U.S.C. § 103(a). As stated above, the Examiner indicated in the prior non-final office action that the claims would be allowable if rewritten or amended to overcome the rejections. Applicants assert that the response filed May 19, 2009 addressed the Examiner’s concerns.

Applicants assert that the Examiner's rejection under 35 U.S.C. § 103(a) is improper and incomplete. The Examiner admits that Campbell does not teach all of the elements of the instant claims, but does not provide any explanation of how or why it would be obvious to one of ordinary skill in the art to combine these elements with Campbell to arrive at the instant invention.

Moreover, the Examiner has improperly placed the initial burden on the applicant to show criticality or unexpected results, when it is the Examiner's initial burden to demonstrate obviousness. For example, the Examiner improperly states that "the applicant has failed to establish any criticality or synergistic results"; however, it was not the applicants' burden to show criticality or unexpected results until the Examiner has properly established a *prima facie* case of obviousness. Therefore, the burden remains on the Examiner to establish a *prima facie* case of obviousness.

Applicants respectfully direct the Examiner's attention to MPEP § 2142 which states:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. ... The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to \*render obvious< the claimed invention. (emphasis added)

Applicants assert that the prior art (Campbell) has not been shown to render obvious the claimed invention.

Furthermore, the MPEP guidelines in § 2142 explicitly state how a proper obviousness rejection must be established:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR International Co. v. Teleflex Inc., ... noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (citations omitted; emphasis added).

Applicants assert that the Examiner has failed to articulate the reasons why the claimed invention would have been obvious. The Examiner has merely used conclusory statements for rejecting the claims and has not provided any rational to support the conclusion of obviousness. The Examiner has not overcome the Examiner's initial burden of explaining how or why the claimed invention would have been obvious and has improperly placed the initial burden on the applicants to establish criticality or unexpected results. Therefore, the Examiner has improperly rejected the claims under 35 U.S.C. § 103(a).

Regardless, applicants assert that the claims are not obvious in view of Campbell. As stated above, the claims are not anticipated by Campbell because Campbell does not teach each and every element of the claimed invention. Furthermore, Campbell does not provide any teaching or suggestion to modify Campbell to include the elements required by the instant claims. Accordingly, Campbell does not render the instant claims obvious.

Applicants, therefore, respectfully traverse the rejection under 35 U.S.C. § 103(a) for at least the above-mentioned reasons. Applicants further respectfully request reconsideration and withdrawal of the final rejection to these claims.

**DEPENDENT CLAIMS**

The applicants may not have independently addressed all of the rejections of the dependent claims. The applicant submits that for at least similar reasons as to why independent claim 1 from which the dependent claims depend are believed allowable as discussed *supra*, the dependent claims are also allowable. The applicant however, reserves the right to address any individual rejections of the dependent claims and present independent bases for allowance for the dependent claims should such be necessary or appropriate.

Thus, applicant respectfully submits that the invention as recited in the claims as presented herein is allowable over the art of record, and respectfully requests that the respective rejections be withdrawn.

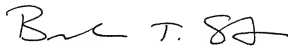
**CONCLUSION**

Based on the foregoing remarks, the applicants respectfully request reconsideration and withdrawal of the pending rejections and allowance of this application. The applicants respectfully submit that the instant application is in condition for allowance. An action passing this case to issue is therefore respectfully requested. In the event that a telephone conference would facilitate examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided. Favorable action by the Examiner is earnestly solicited.

**AUTHORIZATION**

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **504827**, Order No. 1004350.125US.

Respectfully submitted,  
Locke Lord Bissell & Liddell LLP



Dated: November 2, 2009

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